



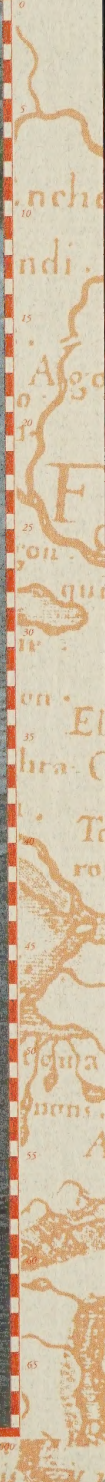
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NAVIGATING

THE GREAT LAKES ST. LAWRENCE SEAWAY SYSTEM

...the short cut to North-America's heartland

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THE SYSTEM

Extending some 2 000 nautical miles into North America's heartland, the Great Lakes St. Lawrence Seaway system gives shippers the most direct water route to and from the continent's major industrial and agricultural markets. The system consists of the five Great Lakes, the Seaway and the St. Lawrence River from the Atlantic Ocean to the Port of Montreal.

Six short canals account for less than 60 nautical miles.

The *South Shore Canal* has two locks and runs 14 nautical miles from the Port of Montreal to Lake St. Louis.

The *Beauharnois Canal* is 11.3 nautical miles in length; it includes two locks and links Lake St. Louis to Lake St. Francis.

The *Wiley-Dondero Canal* is 8 nautical miles long. It includes two U.S. locks and provides access to Lake St. Lawrence.

The *Iroquois Canal*, only 0.3 nautical miles in length, has one lock and a water level control facility.

The *Welland Canal* links Lake Ontario to Lake Erie. Seven of its eight locks are located at its northern extremity and three of these locks are twinned and contiguous. The eighth lock, located near the southern end of the 23.5 nautical mile canal, is a control lock.

The *St. Marys Falls Canal*, at Sault Ste. Marie, consists of four parallel locks of varying dimensions. It links Lake Huron to Lake Superior.

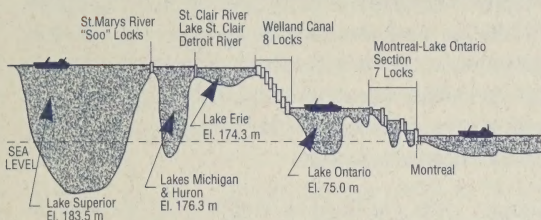
GULF AND ST. LAWRENCE RIVER

An efficient and well serviced waterway, the St. Lawrence River is navigable year round as far as the Port of Montreal. Subject to current and tide variations, it allows a maximum draught of 15.5 m (52 feet) at the Port of Quebec, and 10.67 m (35 feet) at the Port of Montreal.

2

AZU-8317

The St. Lawrence Seaway Profile View



WELCOME TO CANADA!

Requests to enter the territorial waters of Eastern Canada are addressed to ECAREG CANADA via the nearest Coast Guard Radio station.

The Coast Guard provides mariners with up-to-date navigation safety information and ensures vessels meet Eastern Canada Vessel Traffic Services Zone Regulations.

Details on these regulations, as well as information on other Coast Guard services are in the Annual Edition, Canadian Notices to Mariners. Copies are available for \$19.95 CDN from Canada Communications Group – Publishing, Ottawa, Canada K1A 0S9.

THE ST. LAWRENCE SEAWAY

The St. Lawrence Seaway extends from Montreal to Lake Erie and provides direct access to Canadian and American ports serving the vast agricultural and industrial North-American heartland.

As part of its service commitment to shippers, the Seaway operates 24 hours a day during the season from late March until late December. Well defined procedures ensure that ocean vessels transiting in December will easily clear the system prior to the end of the season. Maximum permissible draught is 7.92 m (26 feet)*. Commercial traffic generally proceeds on a first come, first served basis.

*7.95 m (26'1") from April 15 to November 30

THE SYSTEM CON'T

There are seven locks between Montreal and Lake Ontario including two in the United States, operated by the Saint Lawrence Seaway Development Corporation, and five in Canada operated by The St. Lawrence Seaway Authority. The Authority also operates the eight locks of the Welland Canal, linking Lake Ontario to Lake Erie.

Seaway locks are filled or emptied by gravity. On average, lockage takes about 45 minutes from the time the bow passes the approach wall until the stern clears the lock area. Safety features are built in to ensure safe passage through the locks. The signal light systems guiding vessels into lock chambers are specifically designed to eliminate unnecessary delays.

Seaway channels have these controlling dimensions:

Depth: 8.23 m (27 feet)

Width: when flanked by two embankments	60.96 m (200 feet)
when flanked by one embankment	91.44 m (300 feet)
in open reaches	137.16 m (450 feet)



Seaway Traffic Control Services: Once a ship reports in below St. Lambert Lock, inbound, or at Long Point on Lake Erie, downbound, its progress is assisted by a Traffic Control Centre. The Centre at St. Lambert is operated by the St. Lawrence Seaway Authority. The Centre at Eisenhower lock is operated by the Saint Lawrence Seaway Development Corporation. Together the two agencies manage traffic in the five districts between Montreal and mid-Lake Ontario. The Authority also operates the Centre at St. Catharines, which manages navigation from mid-Lake Ontario through the Welland Canal to Long Point on Lake Erie. The Centres provide up-to-date information on navigation conditions and the movement of ships in the system. Supported by experienced lock crews, the Traffic Control Centres are dedicated to the safe, reliable passage of all vessels.

THE GREAT LAKES

The five Great Lakes offer access to world class ports. The routing system is made up of separate shipping lanes adopted by the Canadian and American inland fleets. These upbound and downbound lanes are shown on the general charts of the Great Lakes.

Vessels sailing beyond Lake Erie should obtain the St. Clair and Detroit River Navigation Safety Regulations, which contain speed limits, traffic calls and reports, as well as navigation and anchorage rules.

Vessels enter Lake Superior, the largest of the Great Lakes through the Sault Ste. Marie Locks, operated by the U.S. Army Corps of Engineers. Facilities include four parallel locks of varying dimensions.

THE SHIPS

The fifteen locks between Montreal and Lake Erie accommodate vessels of these maximum dimensions:

Length Overall (LOA)	225.5m (740')
Extreme Breadth	23.8m (78')
Height above water	35.5m (116.5')
Permissible Draft	8.0m (26'3")

Vessel Operators wishing to avail themselves of these changes should submit their vessel drawings for review to the Chief, Marine Services at The St. Lawrence Seaway Authority.

Please note that the angle of raised bascule bridges may limit the width of the cargo gear or superstructure of some vessels.

Ship operators planning a Seaway voyage should obtain a copy of the *Seaway Handbook*. The handbook is invaluable; it contains Canadian and U.S. regulations on condition of vessels, equipment, radio communications, speed, dangerous cargo, pre-clearance and transit information, vessel charges and cargo tolls, and general plans of the system. In fact, transiting vessels must have a copy on board.

Prior to their first transit of the Seaway, vessels will be inspected for:

- **Draught markings** - Clearly marked on both sides, at the bow, stern and amidships.
- **Masts** - Accurate measurement of masts, radar masts and jumbo derricks.
- **Fenders** - Well tapered and in good condition. If not permanently attached, made of acceptable floating material and carefully attended throughout by an experienced crew member.
- **Landing Booms** - Vessels more than 50 m long need at least one landing boom on each side. The *Seaway Handbook* contains recommended boom arrangements.

600 700 800 900 1000

- **Radio Telephone Equipment** - Vessels need two VHF radio telephones. Transmitters must have sufficient power to communicate with Seaway stations from a distance of 48 km (30 miles). Frequencies used are 156.55, 156.6, 156.65, 156.7 and 156.8 MHz. (Channels 11, 12, 13, 14, 16)

- **Mooring Lines** - Uniform thickness throughout, fitted with an eye not less than 2.4 m (8 feet) long and of sufficient strength to check the vessel. Details relating to material, breaking strength, hand lines, fairleads specifications and locations are in the *Seaway Handbook*.

- **Anchors** - Ships over 110 m must have an operational stern anchor. Orange anchor marking buoys of an approved type, fitted with 22 m (75 feet) of suitable line, must be secured to all anchors.

- **Alarms** - Vessels 1600 GRT or over should have the following safety devices in both the wheelhouse and the engine room: propeller direction and shaft r.p.m. indicators, visible and audible wrong-way propeller direction alarms (or propeller lock device), pitch indicator and visible and audible pitch alarms on vessels with controlled pitch propellers.

- **Sewage Disposal**, or containment facilities, are required to meet Canadian and U.S. pollution prevention regulations.

If necessary, most of this equipment may be rented or purchased, and installed, at the Port of Montreal.

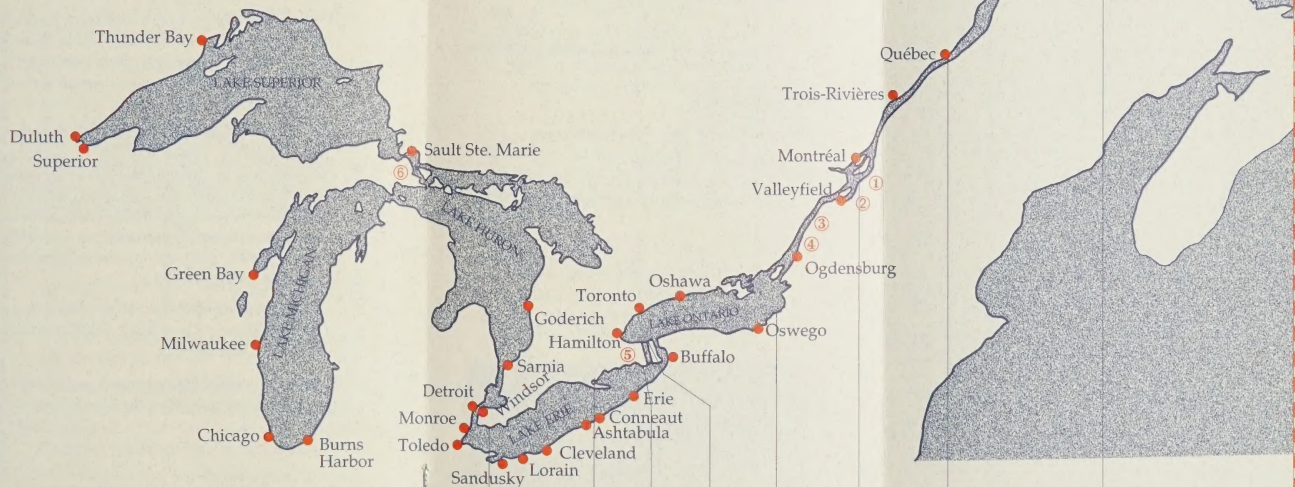
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CANALS — TRANSIT TIMES — PORTS

The Great Lakes St. Lawrence Seaway System



- ① South Shore Canal
- ② Beauharnois Canal
- ③ Wiley - Dondero Canal
- ④ Iroquois
- ⑤ Welland Canal
- ⑥ Sault Ste. Marie Canal



Transit Times & Distances

Sault Ste. Marie	← 29:30 — 370 mi.	← 8:30 — 3:45 — 12:00 — 12:20 — 21:00 — 13:00 — 24:00	→ 2034 mi.
Duluth	← 56:30 — 680 mi.	← 8:30 — 3:40 — 12:00 — 12:20 — 25:00 — 13:00 — 24:00	→ Atlantic to Head of Lakes
Chicago	← 46:30 — 614 mi.	← 116 mi. — 42 mi. — 24 mi. — 139 mi. — 165 mi. — 118 mi. — 251 mi.	→ 500 mi. — Atlantic Ocean

Distances in nautical miles

THE SHIPS CON'T

The St. Lawrence Seaway Authority will be pleased to review at no cost the plans of new buildings, as well as those of vessels arranging a first voyage. Plan packages should indicate "*no commercial value*" and be sent to:

Chief, Marine Services

THE ST. LAWRENCE SEAWAY AUTHORITY

202 Pitt Street, Cornwall, ON K6J 3P7

Tel: (613) 932-5170 Fax: (613) 932-5037

The *Seaway Handbook* is available free of charge from:

The Information Office

THE ST. LAWRENCE SEAWAY AUTHORITY

360 Albert Street, Ottawa, ON K1R 7X7

Tel: (613) 598-4614 Fax: (613) 598-4620

Separate copies of the *Seaway Regulations* can be obtained at no charge from:

The Management Support Division

**THE SAINT LAWRENCE SEAWAY
DEVELOPMENT CORPORATION**

180 Andrews Street

Massena, NY 13662

Tel: (315) 764-3200 Fax: (315) 764-3235

Information on shipping agencies is available from:

THE SHIPPING FEDERATION OF CANADA

300 St. Sacrement Street, Suite 326

Montréal, PQ H2Y 1X4

Tel: (514) 849-2325 Fax: (514) 849-6992

JURISDICTION

Traffic Management

St. Lawrence River, from Sept-Iles (66W Long.) to Port of Montreal:

Canadian Coast Guard
104 Dalhousie Street, Québec, PQ G1K 4B8
Tel: (418) 648-7060 Fax: (418) 648-4236

Great Lakes - Montreal to Long Point, Lake Erie:

The St. Lawrence Seaway Authority
202 Pitt Street, Cornwall, ON K6J 3P7
Tel: (613) 932-5170 Fax: (613) 932-5037

and

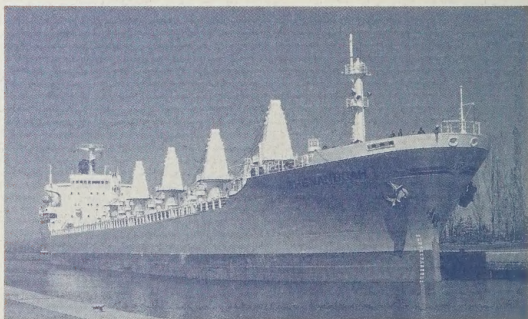
Saint Lawrence Seaway Development Corporation
180 Andrews Street, Massena, N.Y. 13662
Tel: (315) 764-3200 Fax: (315) 764-3235

Remaining Great Lakes - Canadian Waters:

Canadian Coast Guard
One Yonge Street, Toronto, ON M5E 1E5
Tel: (416) 973-9914 Fax: (416) 973-2282

Remaining Great Lakes - U.S. Waters:

U.S. Coast Guard Ninth District
1240 East Ninth Street
Cleveland, OH 44199-2060
Tel: (216) 522-3991 Fax: (216) 522-2738



SAFETY & RELIABILITY

The safety and reliability of the system, and the efficient movement of vessels, are the overriding concerns of the two Seaway agencies.

The extensive structural refit provided by the seven-year, \$175 million Welland Canal Rehabilitation Program, ensures the safe and efficient passage of this, the oldest section of the waterway, well into the future.

The Great Lakes St. Lawrence Seaway shipping community meets regularly at the invitation of the Saint Lawrence Seaway Development Corporation and the St. Lawrence Seaway Authority in fulfillment of their commitment to provide users with reliable transportation at competitive costs.

PILOTAGE

Pilotage is compulsory for foreign flag vessels using the Great Lakes St. Lawrence Seaway system. Information on boarding points, services and rates is available from:

THE LAURENTIAN PILOTAGE AUTHORITY

1402-1080 Beaver Hall Hill

Montréal, PQ J2Z 1S8

Tel: (514) 283-6320 Fax: (514) 496-2409

(for St. Lawrence River and Gulf)

GREAT LAKES PILOTAGE AUTHORITY, LTD.

132 Second Street East

Cornwall, ON K6H 5R9

Tel: (613) 932-2991 Fax: (613) 932-3793

(for Seaway and Canadian Waters of Great Lakes)

DIRECTOR OF GREAT LAKES PILOTAGE

U.S. Coast Guard (G-MVP-7)

2100 Second Street S.W.

Washington, DC 20593-0001

Tel: (202) 267-0214 Fax: (202) 267-4570

(for U.S. Waters of Great Lakes)

CANADIAN PORTS

BAIE-COMEAU

Quai Federal De Baie Comeau
4 rue Couture Apt.3
Baie-Comeau, PQ
G4Z 2G9

Tel: (418) 296-4296
Fax: (418) 296-2623

PORT-CARTIER

Services maritime Cartier
P.O. Box 188
Port-Cartier, PQ
G5B 2G8

Tel: (418) 768-2400
Fax: (418) 768-2344

GODERICH

Goderich Port Authority
Rural Route 2
Goderich, ON
N7A 3S2

Tel: (519) 524-7865

HAMILTON

Hamilton Harbour Commissioners
605 James Street North
Hamilton, ON
L8L 1K1

Tel: (416) 525-4330
Fax: (416) 528-6282

MONTREAL

Montreal Port Corporation
Port of Montreal Building
Wing #1, Cité du Havre
Montreal, PQ
H3C 3R5

Tel: (514) 283-7011
Fax: (514) 283-0829

OSHAWA

Oshawa Harbour Commission
1050 Farewell Avenue
Oshawa, ON
L1H 6N6

Tel: (416) 576-0400
Fax: (416) 576-5701

QUÉBEC

Port of Québec Corporation
150 Dalhousie Street
Québec, PQ
G1K 7P7

Tel: (418) 648-3640
Fax: (418) 648-4160

SARNIA

Government Dock Sarnia
100 Harbour Road
P.O. Box 325
Sarnia, ON
N7T 7J2

Tel: (519) 337-5121

SEPT-ILES

Port of Sept-Iles Authority
421 Arnaud Avenue #202
Sept-Iles, PQ
G4R 3B3

Tel: (418) 968-1231
Fax: (418) 962-4445

THUNDER BAY

Thunder Bay Harbour Commission
P.O. Box 2266
Thunder Bay, ON
P7B 5E8

Tel: (807) 345-6400
Fax: (807) 345-9058

TORONTO

Toronto Harbour Commissioners
60 Harbour Street
Toronto, ON
M5J 1B7

Tel: (416) 863-2000
Fax: (416) 863-4830

TROIS-RIVIERES

Port de Trois-Rivières
P.O. Box 999
1545, Du Fleuve
Trois-Rivières, PQ
G9A 5K2

Tel: (819) 378-2887
Fax: (819) 378-2487

VALLEYFIELD

Valleyfield Harbour Corp.
950 Cadieux Blvd.
Valleyfield, PQ
J6T 6L4

Tel: (514) 373-4021
Fax: (514) 373-4026

WINDSOR

Windsor Harbour Commission
500 Riverside Drive West
Windsor, ON
N9A 5K6

Tel: (519) 258-5741
Fax: (519) 258-5905

AMERICAN PORTS

ASHTABULA

Ashtabula Port Authority
4400 Main Avenue
Ashtabula, OH 44004

Tel: (216) 992-7103
Fax: (216) 992-9306

BUFFALO

Gateway Metro Port
2544 Clinton Street
Buffalo, NY 14224

Tel: (716) 826-2890
Fax: (716) 826-1352

BURNS HARBOR

Port of Indiana at Burns
International Harbor
6600 U.S. Highway 12
Portage, IN 46368

Tel: (219) 787-8636
Fax: (219) 787-8842

CHICAGO

Illinois International Port Authority
3600 East 95th Street
Chicago, IL 60617-5193

Tel: (312) 646-4400
Fax: (312) 221-7678

CLEVELAND

Cleveland-Cuyahoga County
Port Authority
101 Erieside Avenue
Cleveland, OH 44114-1095

Tel: (216) 241-8004
Fax: (216) 241-8016

CONNEAUT

Pittsburgh & Conneaut Dock Co.
P.O. Box 90
Conneaut, OH 44030

Tel: (216) 593-1102
Fax: (216) 593-1102

DETROIT

Detroit/Wayne County Port Authority
174 South Clark Street
Detroit, MI 48209

Tel: (313) 841-6700
Fax: (313) 841-6705

DULUTH

Seaway Port Authority of Duluth
1200 Port Terminal Dr.
Duluth, MN 55816-0877

Tel: (218) 727-8525
Fax: (218) 727-6888

ERIE

Erie-Western PA Port Authority
17 West Dobbins Landing
Erie, PA 16507-1424

Tel: (814) 455-7557
Fax: (814) 455-8070

GREEN BAY

Port of Green Bay
Brown County Board of Harbor Commissioners
305 East Walnut Street
P.O. Box 1600
Green Bay, WI 54305-5600

Tel: (414) 448-4290
Fax: (414) 448-4036

LORAIN

Lorain Port Authority
Room 511, City Hall
Lorain, OH 44052

Tel: (216) 244-2269
Fax: (216) 244-5890

MILWAUKEE

Port of Milwaukee Authority
500 North Harbor Drive
Milwaukee, WI 53202

Tel: (414) 278-3511
Fax: (414) 226-8506

MONROE

Monroe Port Commission
P.O. Box 585
Monroe, MI 48161

Tel: (313) 241-6480
Fax: (313) 241-0813

OGDENSBURG

Ogdensburg Bridge & Port Authority
Bridge Plaza
Ogdensburg, NY 13669

Tel: (315) 393-4080
Fax: (315) 393-7068

OSWEGO

Port of Oswego Authority
P.O. Box 387
Oswego, NY 13126

Tel: (315) 343-4503
Fax: (315) 343-5498

SANDUSKY

Sandusky Dock Corporation
P.O. Box 899
Sandusky, OH 44870

Tel: (419) 626-1214
Fax: (419) 626-0531

SUPERIOR

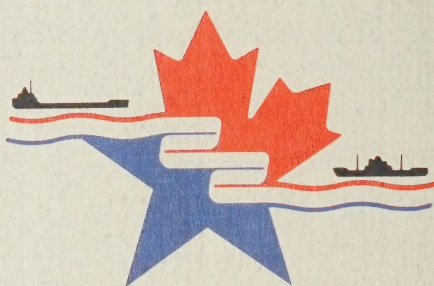
Superior Board of Harbor Commission
1407 Hammond Avenue #208
Superior, WI 54880

Tel: (715) 394-0335
Fax: (715) 394-0590

TOLEDO

Toledo-Lucas County Port Authority
One Maritime Plaza
Toledo, OH 43604-1866

Tel: (419) 243-8251
Fax: (419) 243-1835



THE GREAT LAKES ST. LAWRENCE SEAWAY SYSTEM

For further information, please contact:

**THE ST. LAWRENCE
SEAWAY AUTHORITY**

Constitution Square
360 Albert Street, Suite 1400
Ottawa, Canada
K1R 7X7

Telephone: (613) 598-4614
Facsimile: (613) 598-4620
Telex: 053-3322 (SLSA OTT)

**SAINT LAWRENCE SEAWAY
DEVELOPMENT CORPORATION**

400 Seventh Street, S.W. Suite 5434
Washington, DC 20590
U.S.A.

or

P.O. Box 44090
Washington, DC 20026-4090

Telephone: (202) 366-0091
Facsimile: (202) 366-7147
Telex: 510-100-4787